Rhabdomyolysis and vascular thrombosis supporting the electrocution related death

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Source MALAYSIAN JOURNAL OF PATHOLOGY
Volume: 46 Issue: 2 Page: 331-337

Published AUG 2024

Indexed 2024-09-14

Document Type Article

Abstract Introduction: Electrocution related death remains an ambiguous judgement and requires numerous valid evidence for proper medico-legal diagnosis. While the presence of electrical burn marks is a significant macroscopic indicator, it can be absent, especially on moist skin. The electrical mark still represents a fundamental indicator above all in the medico-legal field, but the identification of pathognomonic elements and signs not limited to the skin alone could be a valid help in the future, especially in unclear cases. Case Report: The deceased was brought-in-dead to the hospital from their workplace, with no signs of fatal natural diseases. External examination revealed a Y-shaped burn mark on the right side of the neck and collapsed blisters with greying rings on both heels. Internal examination showed no alarming

findings. Further, histopathological analysis of the foot blisters and neck burn revealed intraepidermal detachment, elongated nuclei, and coagulative necrosis. Notably, the presence of muscle fibre casts in kidney tubules and microthrombi in lung sections which indicate rhabdomyolysis and vascular thrombosis supported electrocution-related death. Conclusion: These positive findings of the electrical burn marks externally and significant histopathological changes, collectively support the death was due to electrocution, after excluding any major, fatal injuries. Albeit, a detailed inspection of the crime scene plays an important role, in order to classify the electrocution related death.

Keywords

Author Keywords: Electrocution; rhabdomyolysis; vascular thrombosis; electrical burn mark; case report

Keywords Plus: INJURY

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Categories/ Classification

Research Areas: Pathology

Web of Science Categories

Pathology

Language

English

Accession Number

WOS:001308119000013

PubMed ID

39207012

ISSN

0126-8635

IDS Number

F2I9Q

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